

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A dual motion docking apparatus for docking an electronics console to a component board in a chassis, the dual motion docking apparatus comprising:
a first docking mechanism for slidably inserting the electronics console into the chassis in a first direction, such that connectors on the electronics console align with connectors on the component board, wherein the first docking mechanism comprises:
a docking base having a longitudinal female portion, and
a longitudinal male portion located on an underside of the electronics console,
wherein when the electronics console is inserted into an opening in the chassis, the male
portion engages the female portion of the docking base to guide the electronics console
along the docking base as the electronics console is slid into the chassis; and
a second docking mechanism for moving the electronics console towards the component board in a second direction, such that the electronics console connectors engage the component board connectors, thereby enabling the blind docking between the electronics console and the component board, wherein the second direction is orthogonal to the first direction.
2. (Cancelled)

3. (Currently Amended) The apparatus of claim 22 1, wherein the electronics console includes a base plate that includes at least one key slot, and the docking base includes at least one key, wherein after the electronics console is slid into the chassis, respective keys are aligned with respective key slots.

4. (Previously Presented) The apparatus of claim 3, wherein after operation of the second docking mechanism, the keys slots on the base plate mate with the keys of the docking base to ensure that the electronics console connectors correctly align with the component board connectors when the electronics console is in a final docked position.

5. (Cancelled)

6. (Previously Presented) The apparatus of claim 23, wherein the cam mechanism comprises:

a base plate supporting the electronics console;

a sliding plate mounted under the base plate, wherein the handle is slidably mounted beneath the sliding plate;

multiple cam tracks on the sliding plate positioned perpendicular to the longitudinal axis of the electronics console;

multiple cam tracks on the handle positioned parallel to the longitudinal axis of the electronics console; and

multiple cams mounted to the base plate, wherein the respective cam tracks of the sliding plate and the handle are vertically aligned, such that one cam extends through one pair of aligned cam tracks.

7. (Previously Presented) The apparatus of claim 6, wherein the sliding plate includes a longitudinal male member that engages with a longitudinal female member on a docking base, which fixes the sliding plate in place so that the base plate of the electronics console is free to move horizontally with respect to sliding plate.

8. (Original) The apparatus of claim 1, wherein the electronics console further includes retractable lateral support members in a side opposite the component board, wherein when the electronics console is in an undocked position, the lateral support members are retracted within the side of the electronics console, and when the electronics console is in a final docked position, the lateral support members extend from the side to restrain the electronics console both vertical and horizontally.

9. (Original) The apparatus of claim 1, wherein the component board is vertically mounted in the chassis in a front-to-rear orientation, and wherein the electronics console is installed into the chassis along an axis parallel to the component board.

10. (Original) The apparatus of claim 1, wherein the electronics console comprises a central electronics console.

11. (Currently Amended) A method for docking an electronics console to a component board in a chassis, the method comprising:

providing a first docking mechanism for slidably inserting the electronics console into the chassis in a first direction, such that connectors on the electronics console align with connectors on the component board, wherein providing a first docking mechanism comprises:

providing a docking base having a longitudinal female portion, and

providing a longitudinal male portion located on an underside of the electronics console, wherein when the electronics console is inserted into an opening in the chassis, the male portion engages the female portion of the docking base to guide the electronics console along the docking base as the electronics console is slid into the chassis; and

providing a second docking mechanism for moving the electronics console towards the component board in a second direction, such that the electronics console connectors engage the component board connectors, thereby enabling the blind docking between the electronics console and the component board, wherein the second direction is orthogonal to the first direction.

12. (Cancelled)

13. (Currently Amended) The method of claim 24 11, further comprising:

providing the electronics console with a base plate that includes at least one key slot, wherein the docking base includes at least one key such that after the electronics console is slid into the chassis, respective keys are aligned with respective key slots.

14. (Previously Presented) The method of claim 13, wherein after operation of the second docking mechanism, the keys slots on the base plate mate with the keys of the docking base to ensure that the electronics console connectors correctly align with the component board connectors when the electronics console is in a final docked position.

15. (Cancelled)

16. (Previously Presented) The method of claim 25, further comprising:
providing the cam mechanism with
a base plate supporting the electronics console,
a sliding plate mounted under the base plate, wherein the handle is slidably mounted beneath the sliding plate,
multiple cam tracks on the sliding plate positioned perpendicular to the longitudinal axis of the electronics console,
multiple cam tracks on the handle positioned parallel to the longitudinal axis of the electronics console, and
multiple cams mounted to the base plate, wherein the respective cam tracks of the sliding plate and the handle are vertically aligned, such that one cam extends through one pair of aligned cam tracks.

17. (Previously Presented) The method of claim 16, further comprising:
providing the sliding plate with a longitudinal male member that engages with a longitudinal female member on a docking base, which fixes the sliding plate in place so that the base plate of the electronics console is free to move horizontally with respect to sliding plate.
18. (Previously Presented) The method of claim 11, further comprising:
providing the electronics console with retractable lateral support members in a side opposite the component board, wherein when the electronics console is in an undocked position, the lateral support members are retracted within the side of the electronics console, and when the electronics console is in a final docked position, the lateral support members extend from the side and restrain the electronics console both vertical and horizontally.
19. (Previously Presented) The method of claim 11, further comprising:
vertically mounting the component board in the chassis in a front-to-rear orientation; and
installing the electronics console in the chassis along an axis parallel to the component board.
20. (Original) The method of claim 11, wherein the electronics console comprises a central electronics console.

21. (Previously Presented) A method for docking an electronics console to a midplane in a chassis, the method comprising:

attaching a docking base to the chassis and the midplane, the docking base having a longitudinal female portion;

providing the electronics console with,

a base plate,

a sliding plate mounted beneath the base plate, the sliding plate having a longitudinal male portion,

an extendable handle mounted beneath the sliding plate, the extendable handle and the sliding plate having a plurality of cam tracks, and

cams mounted to the base plate through the cam tracks of both the sliding plate and the extendable handle;

in response to an operator slidably inserting the electronics console into the chassis in a first direction, causing the male portion of the sliding plate to engage the female portion of the docking base to guide the electronics console along the docking base as the electronics console is slid into the chassis, wherein the sliding plate is fixed in place; and

in response to an operator pushing-in the extendable handle, causing the cams and cam tracks to move the base plate and the electronics console in a second direction to engage connectors on the electronics console with connectors on the midplane, wherein the second direction is orthogonal to the first direction.

22. (Cancelled)

23. (Previously Presented) The apparatus of claim 1, wherein the second docking mechanism comprises:

a handle extending from a front of the electronics console; and

a cam mechanism, the cam mechanism having a portion that is held immobile by a docking base, wherein after the electronics console is slid into the chassis, the handle is pushed rearward by hand to actuate the cam mechanism, which then pulls the electronics console towards the component board.

24. (Cancelled)

25. (Previously Presented) The method of claim 11, wherein providing a second docking mechanism comprises:

providing a handle extending from a front of the electronics console; and

providing a cam mechanism, the cam mechanism having a portion that is held immobile by a docking base, wherein after the electronics console is slid into the chassis, the handle is pushed rearward by hand to actuate the cam mechanism, which then pulls the electronics console towards the component board.